

~~HOURRICAN~~ WILLIAMS
~~SCHUBERT~~ GARTMAN
~~KLINGSFORN~~ MATTHEW
~~KNOWLES~~ SGEE

August 13, 1973

Subject: Screwworm Eradication in Uruguay

To: Marshall Fox
Program Leader
Economic Research Service

This is in response to a letter dated June 8, 1973, to Mr. Boyd T. Whittle, Regional Rural Development Officer, Office of Development Resources, Washington, D.C., from Mr. Thomas O. Stephens, United States Mission to Uruguay, Agency for International Development, American Embassy, Montevideo, Uruguay. We are enclosing an information kit containing information on the Screwworm Eradication Program in the United States.

We have been engaged in the screwworm eradication work in the United States since 1957 and we have developed considerable expertise in this field. A most important lesson that we have learned is that when the screwworm problem exists in a neighboring country, that country must also be a participant of the program if it is to succeed. Research entomologists have demonstrated that screwworm flies can fly 180 miles on their own wing power and the flies do not recognize political boundary lines between countries. If Uruguay has a serious screwworm problem, the neighboring countries of Brazil and Argentina probably have screwworms among their native animal populations. Any successful attempt that Uruguay would make to eradicate screwworms would depend on the cooperation and involvement of her neighboring countries in screwworm eradication.

It is our understanding that it seldom freezes in Uruguay so that very little help could be expected from cold weather in killing off overwintering populations of screwworm flies. It is our view, in order for the program to succeed in Uruguay it would have to be an International Regional Program adequately financed and staffed.

If the countries in South America decide to embark upon a screwworm eradication program, we would be happy to train experts from Uruguay or other countries in screwworm eradication activities in the United States. There are personnel in the Animal and Plant Health Inspection

Marshall Fox

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Service and the Agricultural Research Service who could probably be made available through grants or various foreign assistance programs as consultants if they are needed to assist the South Americans in developing a feasibility study or later a eradication effort.

Please feel free to ask any further questions, we will be glad to assist in any way.

S. C. Gartman
Chief Staff Veterinarian
Screwworm Eradication

Enclosure

APHIS:VS:DLWilliams:SCGartman:lg 8/13/73 ext. 68821

STATE - A.I.D. - USA ROUTING SLIP					DATE 6/13/70	
TO:	Name or Title	Orgn. Symbol	Room No.	Bldg.	Initials	Date
1.	<i>W. J. Hall</i>					
2.	<i>1152A</i>					
3.						
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it to go to the
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*If you can come
with something - will
appreciate having it sent to
the for forwarding to
Gordon - Thanks*

FROM: (Name and Org. Symbol) <i>Donald H. Miller</i>	ROOM NO. & BLDG.	PHONE NO.
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UNITED STATES MISSION TO URUGUAY
AGENCY FOR INTERNATIONAL DEVELOPMENT

AMERICAN EMBASSY - MONTEVIDEO

MISION ECONOMICA DE LOS ESTADOS UNIDOS EN LA REPUBLICA ORIENTAL DEL URUGUAY

CALLE LAURO MULLER 1776. MONTEVIDEO. URUGUAY

TELEFONOS: 40 90 51 - 40 91 26



U. S. ADDRESS:

USAID/MONTEVIDEO

AMERICAN EMBASSY.

APO NEW YORK 09879

June 8, 1973

Mr. Boyd T. Whittle
Regional Rural Development Officer
Office of Development Resources
AID/Washington
Washington, D. C. 20523

Dear Boyd :

The Government of Uruguay has just formed a special working group to develop plans and programs for the elimination of screw worms. We have been meeting with this group and they have general knowledge about this sterile fly program that we used in the United States. Could you possibly contact the USDA or someone and ask them to provide us information concerning the development, management, operation, etc. of a program of male fly sterilization to eliminate screw worms.

Your help will be appreciated.

Yours truly,

Tom

Thomas O. Stephens
Rural Development Officer

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UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
VETERINARY SERVICES
FEDERAL CENTER BUILDING
HYATTSVILLE, MARYLAND 20782

NOV 30 1973

Subject: Additional Information Requested by Dr. Saulmon
to Support the Request for Supplemental
Appropriations for the Screwworm Program

To: E. E. Saulmon
Deputy Administrator

Because of budget limitations it was necessary to decrease the United States contribution toward the Screwworm Eradication Program in Mexico by \$1,700,000 for FY 74. This made it necessary to reschedule the plant construction timetable, and this resulted in a setback or delay of 3 months from the date at which full production in Mexico was scheduled. For every month that the date for the start of full production is delayed, a corresponding prolongation of the operation of the plant at Mission, Texas, will result at a cost of about \$700,000 per month.

The \$1.7 million cut also caused the Government of Mexico to reschedule their funding sequence for their contribution, and they reported that this was very disruptive to their administrative process. A further cut of FY 74 funds could cause the Mexican section to lose confidence in our funding procedures, and a further disruption would certainly not be a solid basis on which to operate a cooperative program with the magnitude of the screwworm program. The remaining funds for FY 74 are earmarked for the construction of the plant and the purchase of necessary equipment, and any cut in these funds will automatically cause a corresponding delay in the start of the Mexican program.

As a result of the last Technical Meeting on the screwworm program held in Mission on September 26, 1973, and which you chaired, we believe that we made a commitment to the industry representatives to continue the operation of the screwworm plant at Mission at the maximum production for the remainder of this fiscal year. We also committed to them that this would not be done at the expense of the Mexican program. All the industry representatives left the meeting with the idea that we would not "rob" funds earmarked for the Mexican program to maintain the high level of production at Mission. We believe that we should continue to strive to honor our commitments to the livestock industry.

UNITED STATES DEPARTMENT OF AGRICULTURE

ANIMAL AND PLANT HEALTH INSPECTION SERVICE

VETERINARY SERVICES

FEDERAL CENTER BUILDING

WASHINGTON, D. C. 20501

TO SUPPORT THE ROPAS 1-201 SUPPLEMENT

APPROPRIATIONS FOR THE ROPAS 1-201 SUPPLEMENT

M. E. Haulman

Deputy Administrator

Because of budget limitations it was necessary to increase the United States contribution toward the ROPAS 1-201 Supplement. Project in Mexico by \$1,700,000 for FY 74. This made it necessary to reschedule the plant construction timetable, and this resulted in a setback or delay of 2 months from the date at which full production in Mexico was scheduled. For every month that the date for the start of full production is delayed, a corresponding proportion of the operation of the plant at Mission, Texas, will result at a cost of about \$700,000 per month.

The \$1.7 million cut also caused the Government of Mexico to reschedule their funding sequence for their contribution, and they reported that this was very difficult to their administrative process. A further cut of \$1.7 million could cause the Mexican reaction to lose confidence in our funding process, and a further disruption would certainly not be a solid basis on which to operate a cooperative program with the Government of Mexico. The remaining funds for FY 74 are earmarked for the construction of the plant and the purchase of necessary equipment, and any cut in these funds will automatically cause a corresponding delay in the start of the Mexican program.

As a result of the 2nd Technical Meeting on the ROPAS 1-201 Supplement, held in Mexico at September 23, 1973, and which you chaired, we believe that we made a commitment to the industry representatives to continue the operation of the ROPAS 1-201 Supplement at the maximum production for the remainder of this fiscal year. We also committed to them that this would not be done at the expense of the Mexican program. All the industry representatives, I believe, agreed with this fact that we would not reduce earnings for the Mexican program to maintain the high level of production at Mission. We believe that we should continue to strive to honor our commitment to the industry representatives.

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For the above reasons we strongly urge that we meet our commitment to the Mexican section and try to adhere to the present construction schedule and subsequent operation timetable of the program.

We have been requested to develop an estimate of the number of pupae which are now in the ground, and the number of flies which will emerge from pupae at the end of the winter in the overwintering zone.

They are as follows: There are now 10,000 pupae per square mile per week entering the soil in the 14 southern most counties. This quantity of pupae is producing 2,000 live flies per week per square mile or a total of about 23 million per week. By the end of the winter there will be 200 viable flies per square mile emerging each week. This will give a total of 2,308,000 flies emerging per week. These estimates are based upon the assumption of a one to one correspondence in viability between the released flies and the native flies.

In the 11 selected northern counties we estimate that there are now 1,000 flies per square mile per week being produced and that there will be 100 flies per square mile per week emerging by the end of the winter or a total of 700,000 emerging from these counties. By adding the estimated number of 700,000 flies per week from the 11 northern counties to the 2.3 million flies per week which will emerge from the southern counties, we estimate there will be about 3 million flies per week emerging from the southern most counties of Texas at the beginning of next spring.

Our estimates on the number of pupae in the ground in the 14 southern most counties of Texas; Cameron, Willacy, Hidalgo, Starr, Zapata, Jim Hogg, Brooks, Kenedy, Kleberg, Jim Wells, Duval, Webb, Nueces, and San Patricio, are based on the fact that we are releasing 2,000 flies per square mile per week and on the results of egg mass collections in test pens in the overwintering area. Our estimates on the number of flies emerging from pupae in the ground are based on the assumption that at present there is an 80 percent mortality rate of pupae during the 1 to 2 week period they are now in the ground. By the end of the winter, the time span that pupae are in the ground increases to about 1 month. The additional time in the ground exposes the pupae to additional natural hazards increasing the pupal mortality rate to 98 percent at the end of the winter. Pupal mortality rate is a result of such things as predation from ants and moles. Pupae are also killed by the effects of weather such as drowning and freezing. Further mortality may be the result of birds eating prepupae on the ground and from lizards and other insects preying on freshly emerged flies.

For the above reasons we strongly urge that we meet our commitment to the Mexican section and try to adhere to the present construction schedule and subsequent operation timetable of the program.

We have been requested to develop an estimate of the number of pupae which are now in the ground, and the number of litters which will emerge from pupae at the end of the winter in the overwintering zone.

They are as follows: There are now 10,000 pupae per square mile per week entering the soil in the 14 northernmost counties. This quantity of pupae is produced 2,000 five litters per week per square mile or a total of about 23 million per week. By the end of the winter there will be 200 viable litters per square mile emerging each week. This will give a total of 2,308,000 litters emerging per week. These estimates are based upon the assumption of a one to one correspondence in viability between the released litters and the native litters.

In the 11 selected northern counties we estimate that there are now 1,000 litters per square mile per week being produced and that there will be 100 litters per square mile per week emerging by the end of the winter or a total of 700,000 emerging from these counties. By adding the estimated number of 700,000 litters per week from the 11 northern counties to the 2.3 million litters per week which will emerge from the southern counties, we estimate there will be about 3 million litters per week emerging from the southernmost counties of Texas at the beginning of next spring.

Our estimates on the number of pupae in the ground in the 14 southernmost counties of Texas; Cameron, Willacy, Hidalgo, Starr, Zapata, Jim Hogg, Brooks, Kenedy, Kleberg, Jim Wells, Bexar, Webb, Kinney, and San Patricio, are based on the fact that we are releasing 2,000 litters per square mile per week and on the results of egg mass collections in test pens in the overwintering area. Our estimates on the number of litters emerging from pupae in the ground are based on the assumption that at present there is an 80 percent mortality rate of pupae during the 1 to 2 week period they are now in the ground. By the end of the winter, the time span that pupae are in the ground increases to about 1 month. The additional time in the ground exposes the pupae to additional natural hazards increasing the pupal mortality rate to 95 percent at the end of the winter. Pupal mortality rate is a result of such things as predation from ants and moles. Pups are also killed by the effects of weather such as drowning and freezing. The mortality may be the result of birds eating pupae on the ground and from lizards and other insects preying on freshly emerged litters.

We further estimate that because of cooler weather now occurring there are 50 percent fewer pupae entering the ground each week in the 11-county area of Maverick, Zavala, Frio, Atascosa, Karnes, Goliad, Victoria, Calhoun, Dimmit, LaSalle, and McMullen that is north of the 14 above mentioned counties. This leads us to believe that there are 1,000 pupae per square mile per week entering the soil at the present time. These pupae will be subjected to the same causes of mortality as mentioned above.

In order to get the area that is involved, we have used the 11,554 square miles of woodland and unimproved pastures in the 14 southern most counties in Texas mentioned earlier. There are 7,456 square miles of woodland and unimproved pastures in the 11 selected counties north of the first group. (Cropland used as pastures and improved pastures were not used in computing these estimates because we believe that livestock in these pastures are probably more carefully treated for screwworms than livestock in the woodland and unimproved pastures, and therefore there should be very few pupae in the ground in these pastures.)

Based on the above assumptions which are all designed toward the conservative side rather than overstating the problem, we believe reasonably correct estimates can be made.

An extremely mild winter could cause more flies to emerge than we have estimated, and a severe cold winter could cause fewer flies to come out of the soil.

Drs. R. C. Dishland, B. G. Nightower, and C. Hofmann at Mission, Texas, assisted with the preparation of the estimates of numbers of pupae and flies, and Dr. Victor Beal at Hyattsville helped obtain the necessary statistics. Our object in pointing out the number of pupae in the ground is to emphasize the need for funds to support the operation of the sterile screwworm fly barrier program at 100 percent capacity for the remainder of the year. Full operation of the sterile fly barrier will insure the conduct of an "offensive" type program with heavy fly releases deep down in Mexico in the winter months. This will make it unnecessary to operate a "defensive" program next spring based on a steady northward retreat before the advancing migration of the great population of native screwworm flies from Mexico which will take place at that time.

R. P. Jones

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Donald Miller
Director
Programs Development and Application

cc:

Dr. N. L. Meyer, Mexico City, Mexico
Dr. M. E. Meadows, APHIS-VS, Mission, Texas
Dr. R. C. Dishland, ARS, Mission, Texas ✓
Dr. Harvey Kryder, APHIS, Hyattsville, Md.
Dr. Victor Beal, APHIS, Hyattsville, Md.

Dr. R.C. Bushland
Mission, Texas
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Subject : Telephone Call From Major J. F. Record,
U.S. Air Force, Re Puerto Rican Program

November 19, 1973

To : Donald Miller
Director
Programs Development and Application

Major James F. Record of the U.S. Air Force called on November 16, 1973, and asked Dr. Donald L. Williams whether we plan to request the Air Force to provide flying support for the Screwworm Program Methods Development Field Trial in Puerto Rico during fiscal year 1975. Dr. Williams informed him that in all probability we would not request the Air Force to provide additional flying support in FY 1975. He explained to Major Record that the program was originally scheduled to last for 1 year and that if we continued the program through June 30, 1974, the program would have lasted 3 years. The U.S. Department of Agriculture has no desire to continue the program beyond that date. We suggest that anyone not in agreement with this should contact your office.

J. L. Hourrigan
Senior Staff Veterinarian
Sheep, Goat, Equine, and Ectoparasites

cc:

Dr. N. L. Meyer, Mexico City, Mexico
Dr. M. E. Meadows, Mission, Texas
Dr. R. C. Bushland, Mission, Texas ✓
Dr. M. J. Tillery, Hyattsville, Md.
Dr. W. W. Bird, Miami, Florida

Dr. R. F. B. B. B.
et, m. m. m.

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